APPLICANTS: Callaghan et al.

SERIAL NO.: 09/050,841 GROUP ART UNIT: 2761

FILING DATE: 03/30/98

TITLE: METHOD, SYSTEM AND PROGRAM PRODUCTS FOR SHARING STATE INFORMATION ACROSS DOMAINS

ENCLOSURES:
* Letter of Transmittal (1 page)
* Thirteen (13) Sheets of Formal Drawings

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EN998017

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Callaghan et al.

Serial No.: 09/050,841 Group Art Unit: 2761

Filed: 03/30/98 Examiner:

Title: **METHOD, SYSTEM AND PROGRAM PRODUCTS FOR SHARING STATE INFORMATION ACROSS DOMAINS**

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on June 18, 1998.

Blanche E. Schiller
Blanche E. Schiller, Esq.
Attorney for Applicants
Reg. No. 35,670

Date of Signature: June 18, 1998

To: Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Enclosed please find thirteen (13) sheets of formal drawings for the above-designated application.

Respectfully submitted,

Blanche E. Schiller
Blanche E. Schiller, Esq.
Attorney for Applicants
Reg. No. 35,670

Dated: June 18, 1998

HESLIN & ROTHENBERG, P.C.
5 Columbia Circle
Albany, New York 12203
Telephone: (518) 452-5600
Facsimile: (518) 452-5579

F:\USERS\CG\ENDICOTT\0827030D.RAW
June 16, 1998

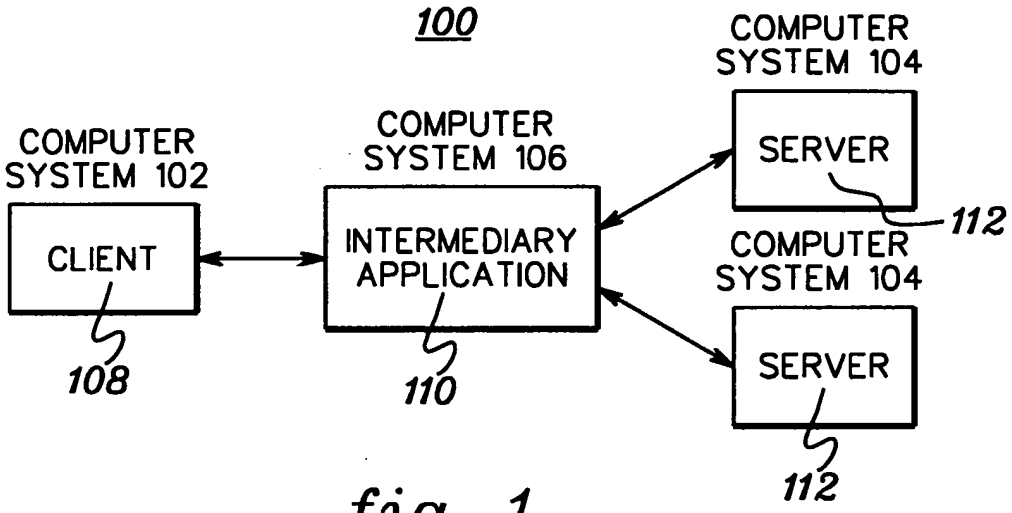

100
COMPUTER SYSTEM 102
CLIENT
108
COMPUTER SYSTEM 106
INTERMEDIARY APPLICATION
110
COMPUTER SYSTEM 104
SERVER
112
COMPUTER SYSTEM 104
SERVER
112

fig. 1

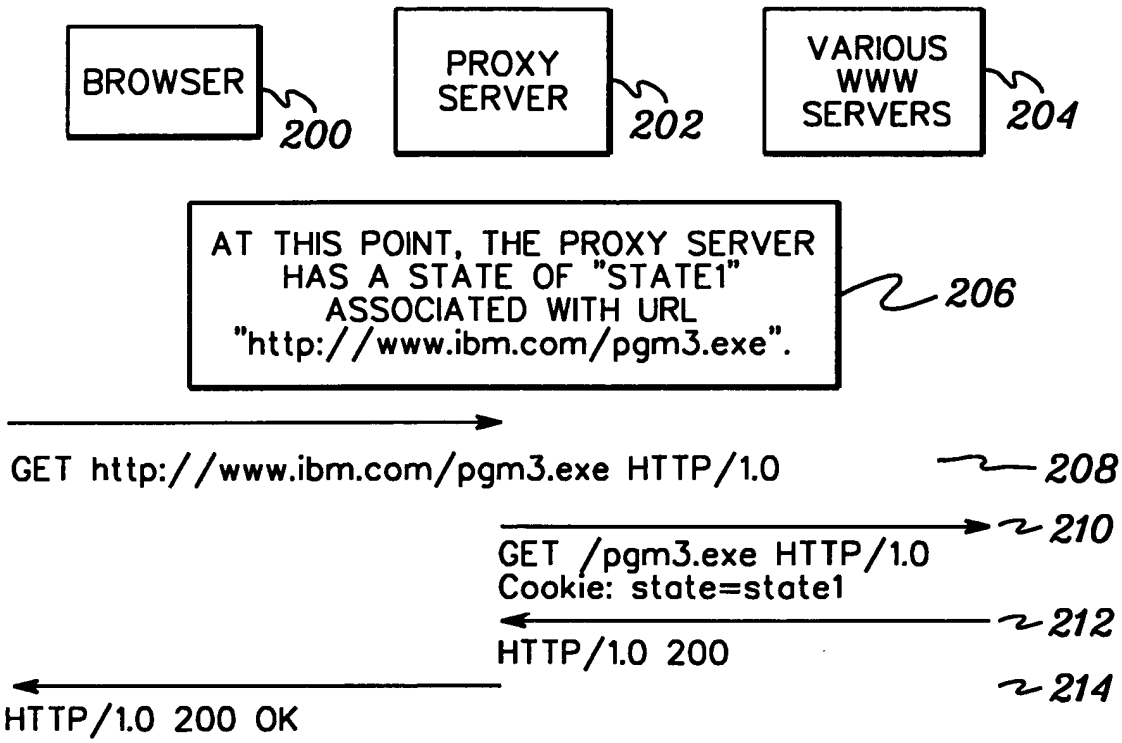

BROWSER
200
PROXY SERVER
202
VARIOUS WWW SERVERS
204
AT THIS POINT, THE PROXY SERVER HAS A STATE OF "STATE1" ASSOCIATED WITH URL "http://www.ibm.com/pgm3.exe".
206
GET http://www.ibm.com/pgm3.exe HTTP/1.0
208
GET /pgm3.exe HTTP/1.0
Cookie: state=state1
210
HTTP/1.0 200
212
HTTP/1.0 200 OK
214

fig. 2

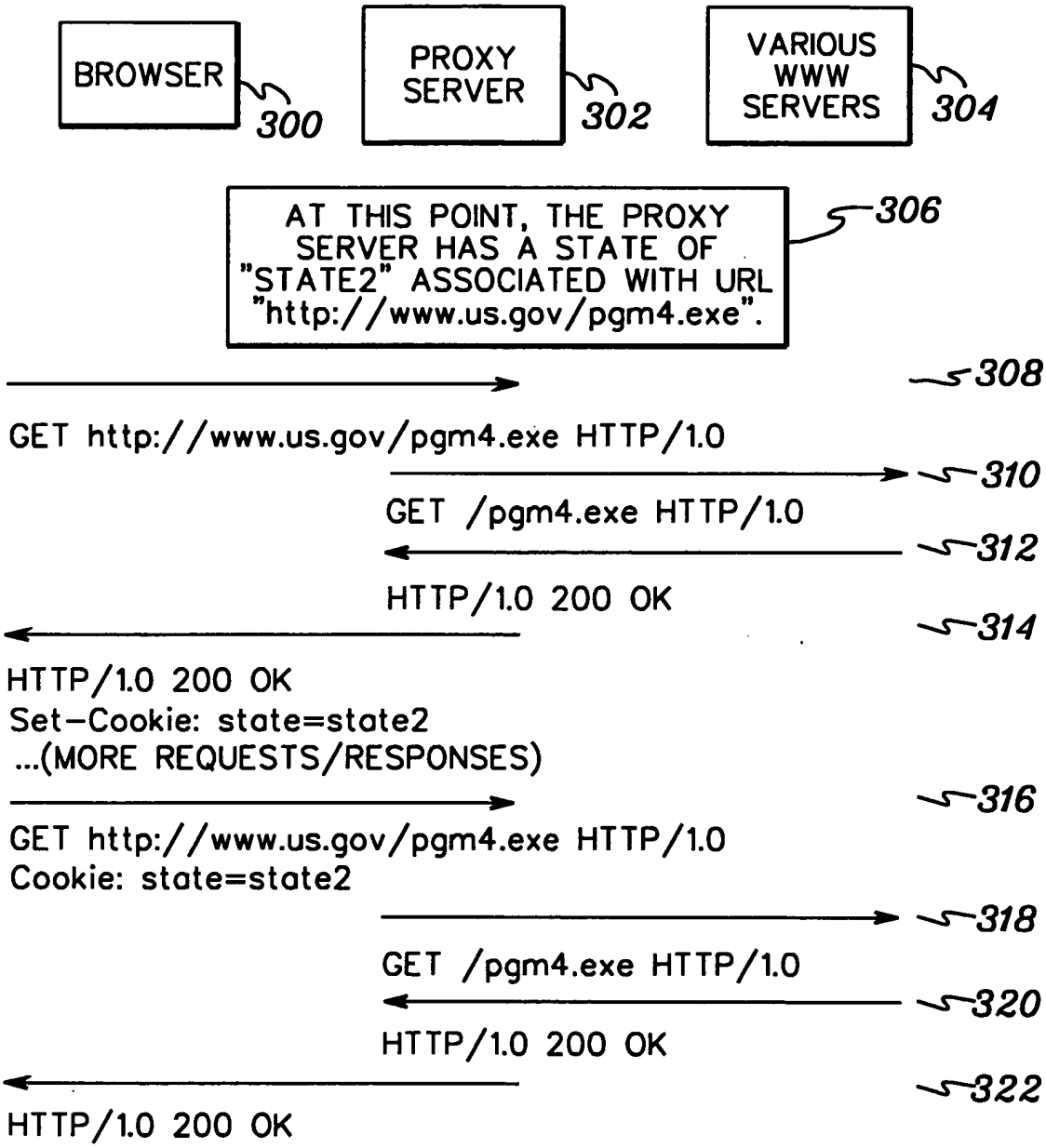

BROWSER
300
PROXY SERVER
302
VARIOUS WWW SERVERS
304
AT THIS POINT, THE PROXY SERVER HAS A STATE OF "STATE2" ASSOCIATED WITH URL "http://www.us.gov/pgm4.exe".
306
308
GET http://www.us.gov/pgm4.exe HTTP/1.0
310
GET /pgm4.exe HTTP/1.0
312
HTTP/1.0 200 OK
314
HTTP/1.0 200 OK
Set-Cookie: state=state2
...(MORE REQUESTS/RESPONSES)
316
GET http://www.us.gov/pgm4.exe HTTP/1.0
Cookie: state=state2
318
GET /pgm4.exe HTTP/1.0
320
HTTP/1.0 200 OK
322
HTTP/1.0 200 OK

fig. 3

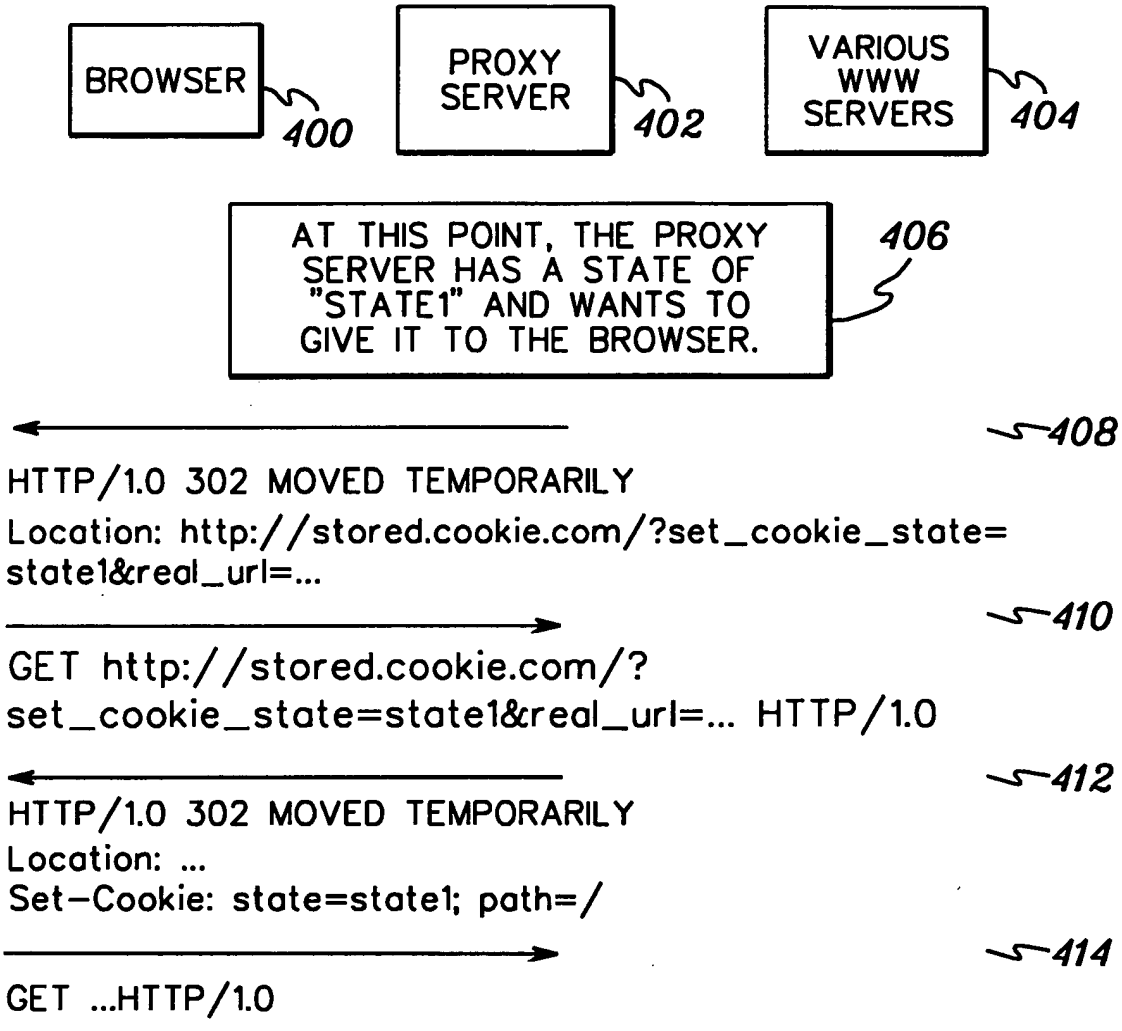

BROWSER
400
PROXY SERVER
402
VARIOUS WWW SERVERS
404
AT THIS POINT, THE PROXY SERVER HAS A STATE OF "STATE1" AND WANTS TO GIVE IT TO THE BROWSER.
406
408
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://stored.cookie.com/?set_cookie_state=state1&real_url=...
410
GET http://stored.cookie.com/?set_cookie_state=state1&real_url=... HTTP/1.0
412
HTTP/1.0 302 MOVED TEMPORARILY
Location: ...
Set-Cookie: state=state1; path=/
414
GET ...HTTP/1.0

fig. 4

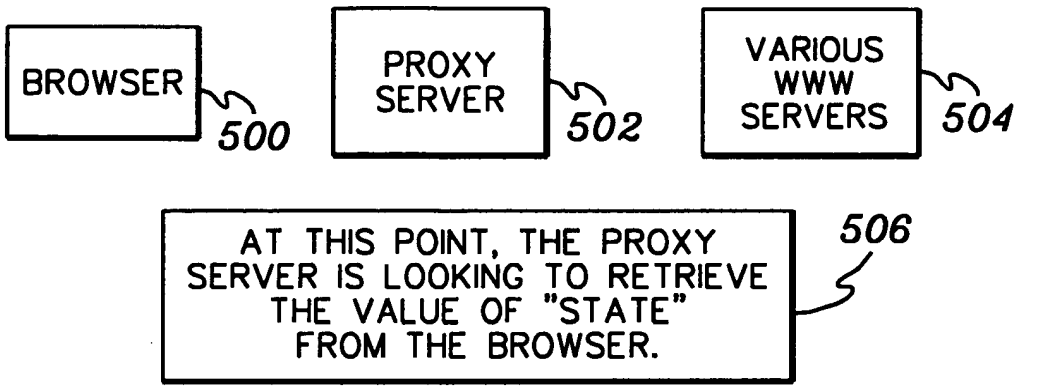

BROWSER
500
PROXY SERVER
502
VARIOUS WWW SERVERS
504
AT THIS POINT, THE PROXY SERVER IS LOOKING TO RETRIEVE THE VALUE OF "STATE" FROM THE BROWSER.
506
508
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://stored.cookie.com/?get_cookie=true&
real_url=...
510
GET http://stored.cookie.com/?get_cookie=true&
real_url=...
HTTP/1.0
Cookie: state=state1
512
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://...
514
GET ...HTTP/1.0

fig. 5

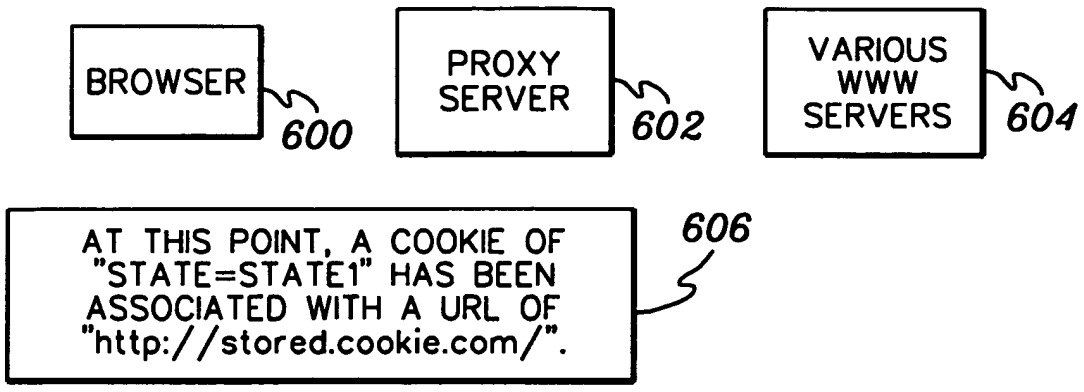

BROWSER
600
PROXY SERVER
602
VARIOUS WWW SERVERS
604
AT THIS POINT, A COOKIE OF "STATE=STATE1" HAS BEEN ASSOCIATED WITH A URL OF "http://stored.cookie.com/".
606
GET http://www.ibm.com/pgm1.exe HTTP/1.0
608
HTTP/1.0 302 MOVED TEMPORARILY.
Location: http://stored.cookie.com/?get_cookie=true&real_url=www.ibm.com/pgm1.exe
Set-Cookie: action=checking
610
GET http://stored.cookie.com/?get_cookie=true&real_url=www.ibm.com/pgm1.exe
HTTP/1.0
Cookie: state=state1
612
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://www.ibm.com/pgm1.exe?set_cookie_state=state1
614
GET http://www.ibm.com/pgm1.exe?set_cookie_state=state1
Cooking: action=checking
616
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://www.ibm.com/pgm1.exe
Set-Cookie: state=state1; domain=.ibm.com; path=/
618
GET http://www.ibm.com/pgm1.exe HTTP/1.0
Cookie: action=checking; state=state1
620
GET /pgm1.exe HTTP/1.0
Cookie: state=state1
622
HTTP/1.0 200 OK
624
HTTP/1.0 200 OK
Set-Cookie: action=done; expires=Thursday, 01-Jan-1970 01:00:00 GMT
626

fig. 6a

BROWSER
600
PROXY SERVER
602
VARIOUS WWW SERVERS
604
630
GET http://www.us.gov/pgm2.exe HTTP/1.0
632
HTTP/1.0 302 MOVED TEMPORARILY.
Location: http://stored.cookie.com/?get_cookie=true&
real_url=www.us.gov/pgm2.exe
Set-Cookie: action=checking
634
GET http://stored.cookie.com/?get_cookie=true&real_url=
www.us.gov/pgm2.exe
HTTP/1.0
Cookie: state=state1
636
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://www.us.gov/pgm2.exe?set_cookie_state=
state1
638
GET http://www.us.gov/pgm2.exe?set_cookie_state=state1
Cookie: action=checking
640
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://www.us.gov/pgm2.exe
Set-Cookie: state=state1; domain=.us.gov; path=/
642
GET http://www.us.gov/pgm2.exe HTTP/1.0
Cookie: action=checking; state=state1
644
GET /pgm2.exe HTTP/1.0
Cookie: state=state1
646
HTTP/1.0 200 OK
648
HTTP/1.0 200 OK
Set-Cookie: action=done; expires=Thursday,
01-JAN-1970 01:00:00 GMT

fig. 6b

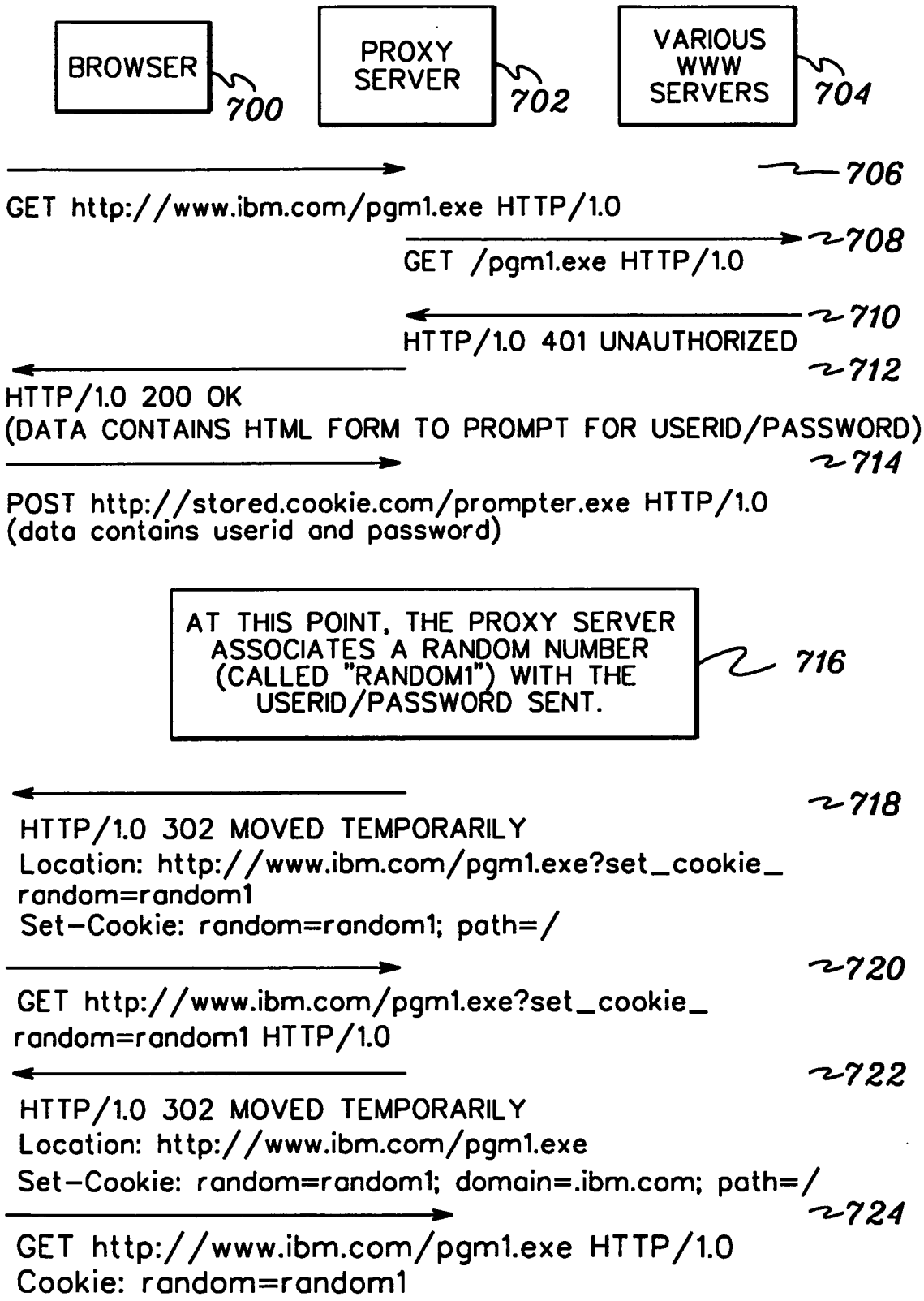

BROWSER
700
PROXY SERVER
702
VARIOUS WWW SERVERS
704
706
GET http://www.ibm.com/pgm1.exe HTTP/1.0
708
GET /pgm1.exe HTTP/1.0
710
HTTP/1.0 401 UNAUTHORIZED
712
HTTP/1.0 200 OK
(DATA CONTAINS HTML FORM TO PROMPT FOR USERID/PASSWORD)
714
POST http://stored.cookie.com/prompter.exe HTTP/1.0
(data contains userid and password)
AT THIS POINT, THE PROXY SERVER ASSOCIATES A RANDOM NUMBER (CALLED "RANDOM1") WITH THE USERID/PASSWORD SENT.
716
718
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://www.ibm.com/pgm1.exe?set_cookie_random=random1
Set-Cookie: random=random1; path=/
720
GET http://www.ibm.com/pgm1.exe?set_cookie_random=random1 HTTP/1.0
722
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://www.ibm.com/pgm1.exe
Set-Cookie: random=random1; domain=.ibm.com; path=/
724
GET http://www.ibm.com/pgm1.exe HTTP/1.0
Cookie: random=random1

fig. 7a

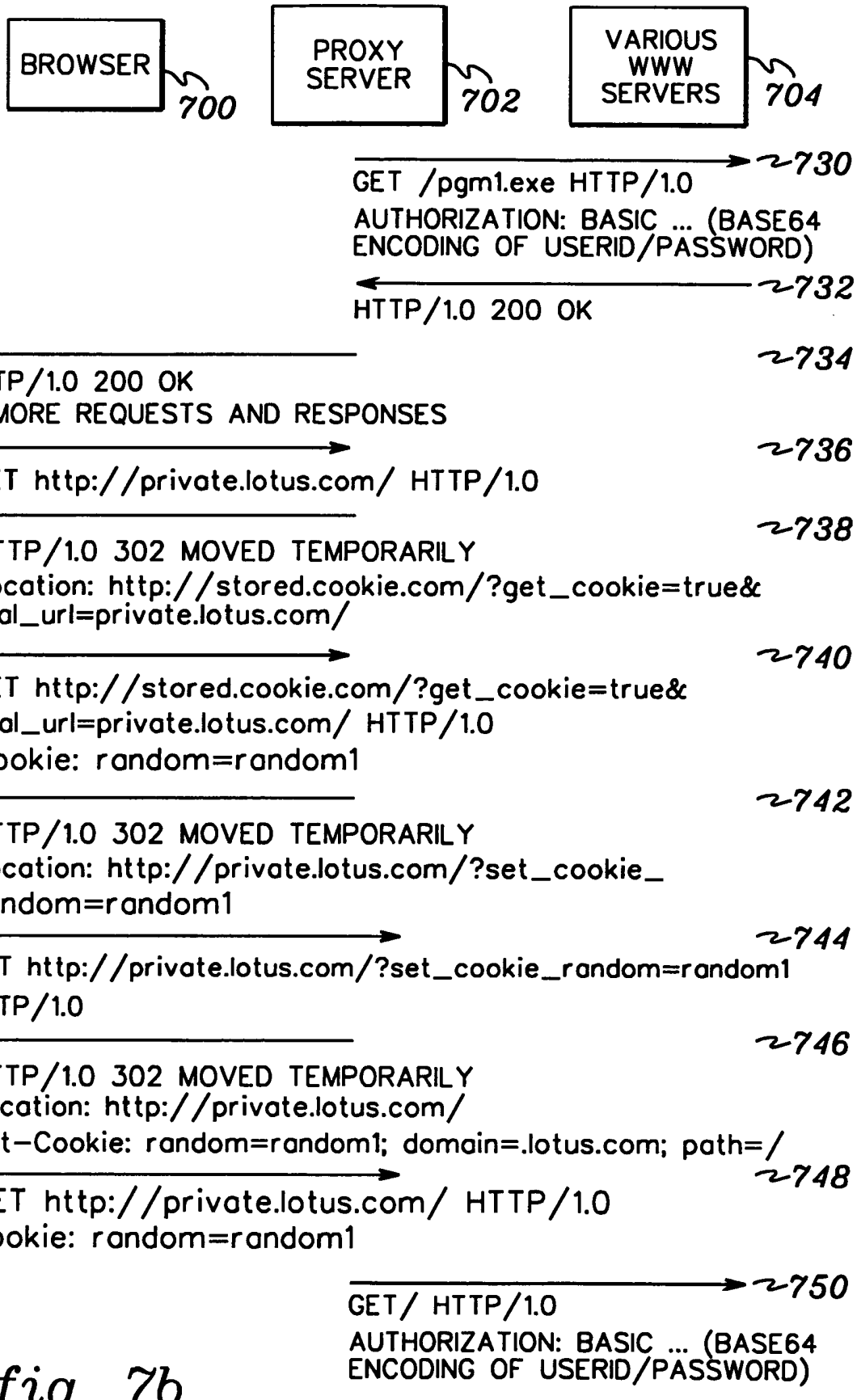

BROWSER
700
PROXY SERVER
702
VARIOUS WWW SERVERS
704
730
GET /pgm1.exe HTTP/1.0
AUTHORIZATION: BASIC ... (BASE64 ENCODING OF USERID/PASSWORD)
732
HTTP/1.0 200 OK
734
HTTP/1.0 200 OK
... MORE REQUESTS AND RESPONSES
736
GET http://private.lotus.com/ HTTP/1.0
738
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://stored.cookie.com/?get_cookie=true&real_url=private.lotus.com/
740
GET http://stored.cookie.com/?get_cookie=true&real_url=private.lotus.com/ HTTP/1.0
Cookie: random=random1
742
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://private.lotus.com/?set_cookie_random=random1
744
GET http://private.lotus.com/?set_cookie_random=random1 HTTP/1.0
746
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://private.lotus.com/
Set-Cookie: random=random1; domain=.lotus.com; path=/
748
GET http://private.lotus.com/ HTTP/1.0
Cookie: random=random1
750
GET/ HTTP/1.0
AUTHORIZATION: BASIC ... (BASE64 ENCODING OF USERID/PASSWORD)

fig. 7b

806
GET http://www.ibm.com/online.exe?purchase=Aptiva HTTP/1.0

808
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://stored.cookie.com/?get_cookie=true&
real_url=www.ibm.com/online.exe%3Fpurchase=Aptiva
Set-Cookie: action=checking

810
GET http://stored.cookie.com/?get_cookie=true&real_url=
www.ibm.com/online.exe%3Fpurchase=Aptiva HTTP/1.0

812
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://www.ibm.com/online.exe?purchase=Aptiva

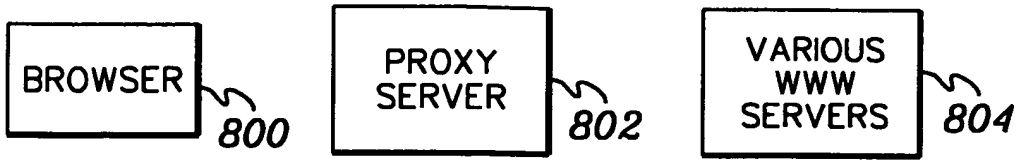
814
GET http://www.ibm.com/online.exe?purchase=Aptiva
HTTP/1.0
Cookie: action=checking

816
GET /online.exe?purchase=Aptiva
HTTP/1.0

818
HTTP/1.0 200 OK
Set-Cookie: purchases=Aptiva

820
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://stored.cookie.com/?set_cookie_purchases
=Aptiva &real_url=www.ibm.com/online.exe%3Fpurchase=Aptiva
HTTP/1.0
Set-Cookie: purchases=Aptiva
Set-Cookie: result=File1
Set-Cookie: action=done; expires=Thursday,
01-Jan-1970 01:00:00 GMT

fig. 8a



830
GET http://stored.cookie.com/?set_cookie_purchases=Aptiva
&real_url=www.ibm.com/online.exe%3Fpurchase=Aptiva HTTP/1.0

832
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://www.ibm.com/online.exe?purchase=Aptiva
Set-Cookie:www.ibm.com_purchases=Aptiva; path=/

834
GET http://www.ibm.com/online.exe?purchase=Aptiva HTTP/1.0
Cookie:purchases=Aptiva; result=File1

836
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://stored.cookie.com/?get_cookie=true
&real_url=www.ibm.com/online.exe%3Fpurchase=Aptiva
HTTP/1.0
Set-Cookie: action=checking

838
GET http://stored.cookie.com/?get_cookie=true&real_url=
www.ibm.com/online.exe%3Fpurchase=Aptiva HTTP/1.0
Cookie: www.ibm.com_purchases=Aptiva

840
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://www.ibm.com/online.exe?purchase=Aptiva
&set_cookie=www.ibm.com_purchases=Aptiva

842
GET http://www.ibm.com/online.exe?purchase=Aptiva
&set_cookie=www.ibm.com_purchases=Aptiva HTTP/1.0
Cookie:purchases=Aptiva; result=File1; action=checking

844
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://www.ibm.com/online.exe?purchase=Aptiva
Set-Cookie:www.ibm.com_purchases=Aptiva

fig. 8b

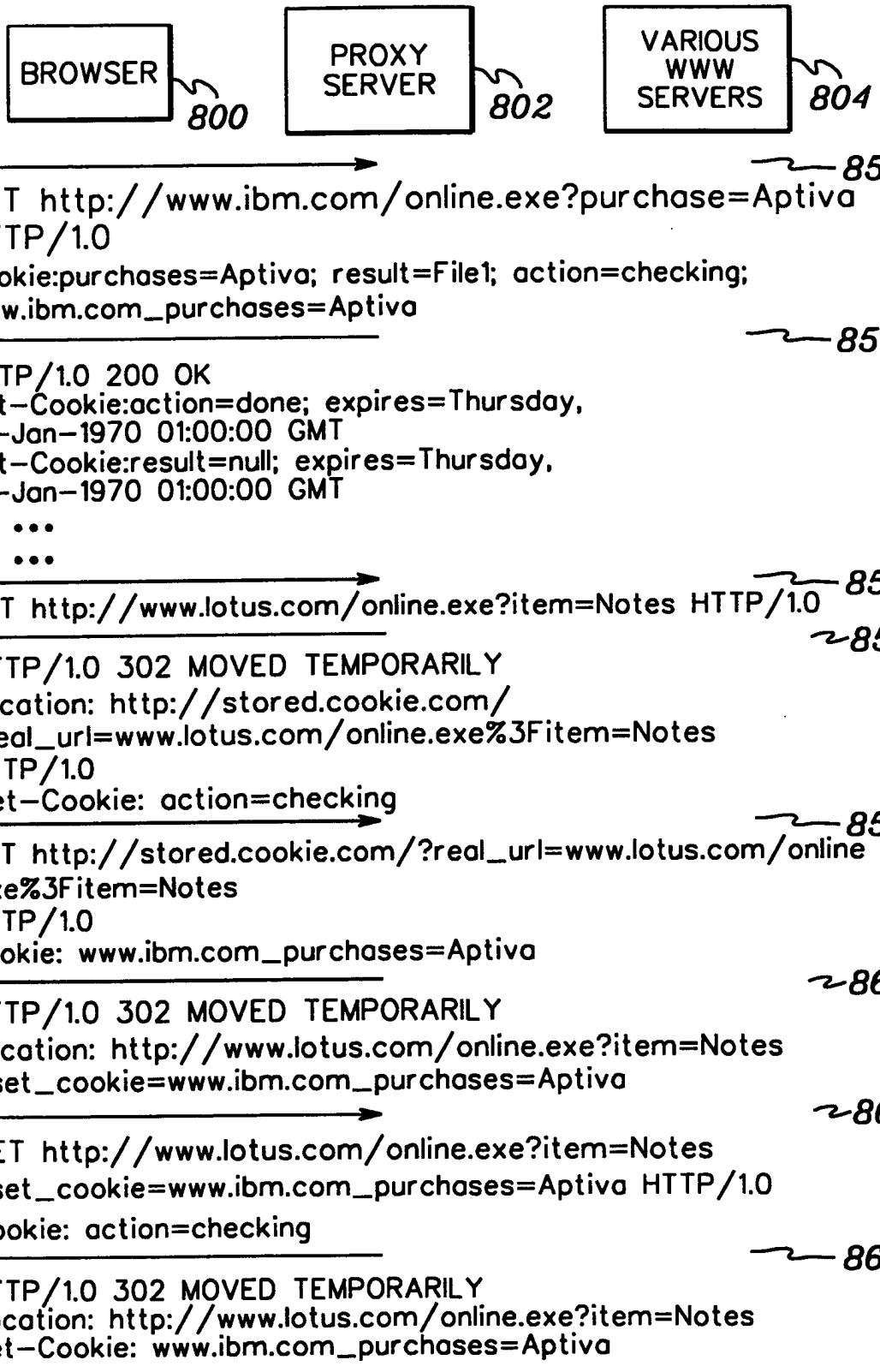

BROWSER
800
PROXY SERVER
802
VARIOUS WWW SERVERS
804
850
GET http://www.ibm.com/online.exe?purchase=Aptiva HTTP/1.0
Cookie:purchases=Aptiva; result=File1; action=checking; www.ibm.com_purchases=Aptiva
852
HTTP/1.0 200 OK
Set-Cookie:action=done; expires=Thursday, 01-Jan-1970 01:00:00 GMT
Set-Cookie:result=null; expires=Thursday, 01-Jan-1970 01:00:00 GMT
• • •
• • •
854
GET http://www.lotus.com/online.exe?item=Notes HTTP/1.0
856
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://stored.cookie.com/?real_url=www.lotus.com/online.exe%3Fitem=Notes HTTP/1.0
Set-Cookie: action=checking
858
GET http://stored.cookie.com/?real_url=www.lotus.com/online.exe%3Fitem=Notes HTTP/1.0
Cookie: www.ibm.com_purchases=Aptiva
860
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://www.lotus.com/online.exe?item=Notes&set_cookie=www.ibm.com_purchases=Aptiva
862
GET http://www.lotus.com/online.exe?item=Notes&set_cookie=www.ibm.com_purchases=Aptiva HTTP/1.0
Cookie: action=checking
864
HTTP/1.0 302 MOVED TEMPORARILY
Location: http://www.lotus.com/online.exe?item=Notes
Set-Cookie: www.ibm.com_purchases=Aptiva

fig. 8c

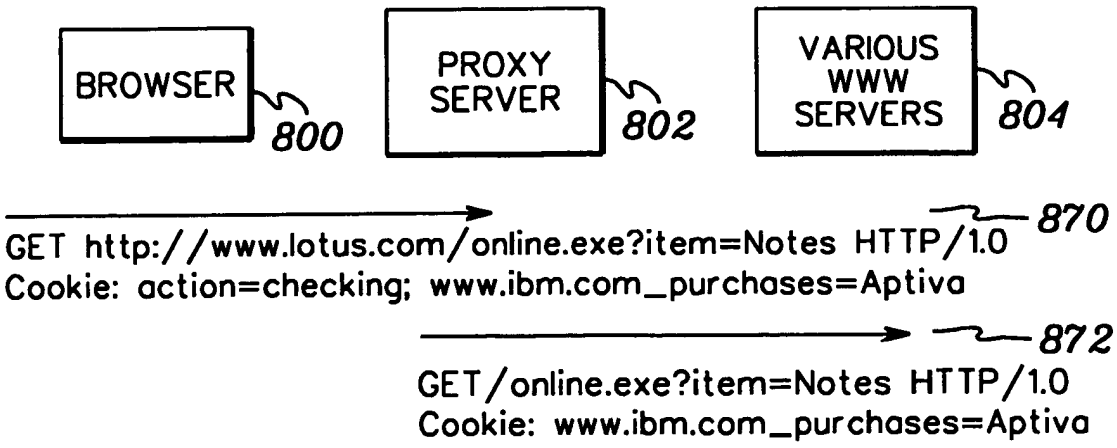

BROWSER
800
PROXY SERVER
802
VARIOUS WWW SERVERS
804
GET http://www.lotus.com/online.exe?item=Notes HTTP/1.0
870
Cookie: action=checking; www.ibm.com_purchases=Aptiva
GET/online.exe?item=Notes HTTP/1.0
872
Cookie: www.ibm.com_purchases=Aptiva

fig. 8d